

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Appln. No. 09/665,658

REMARKS

Upon entry of this Amendment, claims 1, 2, 4, 6-10, 21, 22, 26, 28-46 and 49-53 are all the claims pending in the application. Claims 3, 5, 11-20, 23-25, 27, 47 and 48 have been canceled pursuant to a Restriction Requirement and either have been filed, or may be filed in the future, in a Divisional Application. Applicant thanks the Examiner for acknowledging allowance of claims 28, 40-46 and 49-53 and for acknowledging allowable subject matter in claims 2, 3, 6, 7, 9, 10 and 21, which are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

For the reasons set forth below, Applicant respectfully traverses the rejections and requests favorable disposition of the application.

Rejection of Claims 1, 4, 8, 22, 26 and 29-39

Applicant respectfully submits that the prior art references of record, including that which is presently cited in the final office action dated April 26, 2005, disclose systems and processes that are completely different than that which has been proposed by Applicant in the instant application.

Applicant is a fellow in the IEEE and has been so since 1963 and is also the recipient of the David Sarnoff Award for Electronics. In 1983 Applicant was awarded the IEEE Pioneer Award for inventing Pulse Doppler Radar and has been a charter member of the University of Maryland Innovation Hall of Fame since 1986. Accordingly, Applicant is highly knowledgeable and skilled in the instant state of the art.

Applicant has conceived and developed a "stand alone" detection and receiving capability for wireline and wireless signals. In particular, Applicant's system is capable of identifying fluctuating or fading signals from background "noise" without the requirement of

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auxiliary information. This "stand alone" feature is of particular importance because often times it is not known whether a signal is even present, let alone detectable.

As disclosed and claimed, one unique feature of Applicant's invention is a topological number array (TNA) which facilitates a heretofore unknown method for rapidly deriving an equivalent noise portion of the signal-plus-noise carrier samples and permits determination of the polarity of each noise estimate.

Although Applicant believes that the claims as presently presented each include patentable subject matter, to expedite prosecution of the instant application, Applicant has hereby amended the rejected independent claims to include patentable subject matter from allowed or allowable claims. In particular, claim 1 has been amended to include the allowable subject matter of claim 3, which presently stands objected to. Claim 1, therefore, is in allowable form and allowance of claim 1 is kindly requested. Claim 3 has been canceled. Each of claims 2-4, 6-9, 21, 22, 26, 30-34, 38 and 39 are allowable at least by virtue of their dependence from claim 1.

Independent claim 29 has been amended to substantially include the allowable subject matter of allowed claim 52. In particular, claim 29 has been amended to include "means for iteratively processing data ... for determining an estimate of a magnitude and polarity of a noise-only portion of a signal plus noise version of the received signals", wherein the iterative process includes successively adding a series of values to the data and determining a value that results in the noise only portion to change polarity. Because claim 29 has been amended to include at least the subject matter of allowed claim 52, claim 29 is believed to be in allowable form for at least the same reasons as claim 52 and allowance thereof is kindly requested.

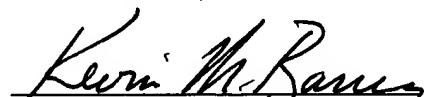
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Lastly, claim 35 has been amended to include patentable subject matter from allowed claim 46. Specifically, the processes of simultaneously receiving signals from a continuous broadband frequency spectrum ..., and iteratively processing data to determine the magnitude and polarity of the noise-only portion of the receive signals, have been added to existing claim 35, along with the wherein clauses of allowed claim 46. Accordingly, it is believed that claim 35 is in allowable form for at least the same reasons as claim 46.

Conclusion

In view of the foregoing amendments and remarks, the application is believed to be in form for immediate allowance with claims 1, 2, 4, 6-10, 21, 22, 26, 28-46 and 49-53, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



Kevin M. Barner
Registration No. 46,075

CAHN & SAMUELS, LLP
Telephone: (202) 331-8777
Facsimile: (202) 331-3838

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